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ABSTRACT

The development of sound theory and theory-based instruments is essential for studying the impact of instructional leadership on student learning outcomes. This article argues that a constructivist perspective provides a more reliable basis than a functionalist perspective for understanding what differentiates effective instructional leaders from others. The differences do not lie in a distinctive set of characteristics nor mastery of a set of discrete leadership skills. Instead, what distinguishes effective instructional leaders from others is a proactive approach to work that is guided by a distinctive set of beliefs about what is possible. Data are presented to show the extent to which self-reports of principals and teacher ratings are in agreement regarding perceptions of instructional leadership within the school building. Additional data reported here demonstrate a chain of empirical relationships from principal instructional leadership beliefs and practices, through teacher satisfaction and commitment, to student commitment and achievement. (Contains 41 references.) (Author)

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Instructional Leadership: A Constructivist Perspective

by Samuel E. Krug

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INSTRUCTIONAL LEADERSHIP: A CONSTRUCTIVIST PERSPECTIVE

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Abstract

The development of sound theory and theory-based instruments is essential for studying the impact of instructional leadership on student learning outcomes. This article argues that a constructivist perspective provides a more reliable basis than a functionalist perspective for understanding what differentiates effective instructional leaders from others. The differences do not lie in a distinctive set of characteristics nor mastery of a set of discrete leadership skills. Instead, what distinguishes effective instructional leaders from others is a proactive approach to work that is guided by a distinctive set of beliefs about what is possible. Data are presented to show the extent to which self-reports of principals and teacher ratings are in agreement regarding perceptions of instructional leadership within the school building. Additional data reported here demonstrate a chain of empirical relationships from principal instructional leadership beliefs and practices, through teacher satisfaction and commitment, to student commitment and achievement.

INSTRUCTIONAL LEADERSHIP: A CONSTRUCTIVIST PERSPECTIVE[1]

by

Samuel E. Krug

If there is one conclusion regarding the U. S. educational system on which there is wide agreement, it is that there is great variation in its quality. Dickens' comment regarding Europe in the late 18th century could apply as well to public education today: it is the best of times, it is the worst of times.

On the one hand, students have access to greater resources than did students of any previous generation. Contrast, for example, today's tools for learning--the libraries, computers, and curricula--with the chalkboards of previous generations. On the other hand, the preparation students receive too often seems inadequate to the role they must eventually play as adults in our society. For example, industry spends vast sums each year to improve employee skills in such areas as reading, writing, and mathematics that lie within the proper domain of the public school curriculum (Carlson, 1990). Industry is not the only sector to be affected by the shortcoming of the primary and secondary educational systems. For example, many colleges and universities have developed their own programs to remediate the effects of inadequate secondary preparation.

The publication of *A Nation at Risk* (National Commission on Excellence in Education, 1983) focused national concern on the adequacy of our nation's schools, which often represent a more convenient and reachable target than the true villains. In this case, the "failure" of the schools may be seen as a failure to remediate problems they were never intended to solve and a failure to function within a culture for within a culture for which they were not designed. This new culture was one in which students were no longer embedded with a strong family structure that supported and valued the educational enterprise. It was one in which poverty and crime often threatened the security of students and teachers at work. And this new culture was one in which value structures shifted from long-term goals to short-term gains. Perhaps this facet of cultural change was most dramatically reflected in the junk-bond schemes of the 1980s that left billions of

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[1]This report appears in a special issue, *Educational Administration Quarterly*, Volume 18, No. 3, August 1992.

dollars in long-term debt to pay for the excesses of a single decade and a savings and loan problem the, by comparison, help us understand why George Bailey really enjoyed a wonderful life.

The extraordinary social changes of the last half century significantly altered the nature of education. For many years, the system had functioned well by managing academic curricula that had their roots in the *New England Primer* of 1690. Three hundred years later the system was no longer equipped to meet the educational needs of this new generation of students for whom reading, writing, and arithmetic were necessary, but not sufficient.

Some school managed to succeed despite the overwhelming changes they faced. A large number of characteristics distinguished these "effective schools" (Austin, 1979; Blase, 1987; Illinois State Board of Education, 1986). However, among the most important was the pivotal role played by the principals of effective schools. That is, the quality of leadership provided in these schools seemed to be the critical factor in explaining why they succeeded where others failed.

Preliminary Thoughts About Leadership

Leadership is the process by witch the actions of people within a social organization are guided toward the realization of specific goals. Thompson (1980) put it more directly when he described leadership as getting the job done through people. However, beyond this basic definition there is wide diversity of opinion regarding the answers to such fundamental questions as whether common themes can be identified in the behavior of leaders that transcend specific contexts, whether leadership can be reliably measured, and whether there are universal characteristics that typify leaders.

There are many reasons for this diversity of opinion. For example, there are many different kinds of social organizations and the nature of the organization has much to do with defining the role, decision-making power and other parameters of leadership within the organization. Both the chairperson of a volunteer organization and a military field commander have a specific, well-defined mission. However, the range of actions open to each are likely to be quite different.

In addition, a wide variety of social scientists have examined and studied leadership. Each group brings a different perspective and special emphasis to their study. The psychologist, for example, emphasizes individual characteristics more than a sociologist for whom the group process is the primary focus of study. Political scientists may direct their attention toward government initiatives, community support, regulatory guidelines, and other factors that define the policy context within which leadership is exercised. Because of these differences in emphasis, each group may come to somewhat different, but hopefully correlated, conclusions regarding the nature and expression of leadership.

Although the general topic of leadership has been extensively studied for some time, the specific emphasis on instructional leadership is relatively new. As noted earlier, this focus emerged initially from a study of the most important characteristics that appeared to distinguish effective from ineffective schools. The sections that follow attempt to provide answers to two important questions relating to instructional leadership: How is instructional leadership expressed? What are the underlying mechanisms by which instructional leaders become effective?

Instructional Leadership May Be Broadly Described Along Five Dimensions of Expression

We know that if principals fail to meet the various rules and regulations prescribed by the School Code, they can be stripped of their administrative certificates and lose their position. Conversely, we know that if they perform their administrative duties, they will at least keep their certificates and possible their jobs. In short, we know something about the kinds of behavior that describe an administrator, perhaps even a good administrator. But how can we operationally describe what an instructional leader does, particularly a good instructional leader?

Are there specific types of behavior or activities that distinguish effective instructional leaders? During the decade of the 80s, an extensive literature developed from attempts to describe activities that characterized principals of effective schools. One difficulty with this approach is that there are many different kinds of school settings and the range of ways in which leadership can be exercised is virtually limitless. A related problem is that it is difficult to detect which activities are leadership activities and which are not.

Several efforts have been directed toward identifying communalities within this vast array of data. Among the earliest attempts was work by Hallinger (1984; Hallinger & Murphy, 1985) whose studies of principal behavior led him to conclude that instructional leadership could be conceptualized in terms of 10 categories: Frame the School Goals, Communicate the School Goals, Supervise and Evaluate Instruction, Coordinate the Curriculum, Monitor Student Progress, Protect Instructional Time, Maintain High Visibility, Provide Incentives for Teachers, Promote Professional Development, Provide Incentive for Learning.

More recent studies have suggested that a five-factor taxonomy was structurally more tenable, simpler to work with, and not appreciably less precise (Krug, 1989; Krug, Ahadi, & Scott, 1991; Maehr & Ames, 1988; Maehr, Braskamp, & Ames, 1988). Others (e.g., Weber, 1990) appear to have come independently to similar conclusions regarding both the number and nature of this taxonomy. A brief summary of these five areas is required, therefore, to answer the question of what instructional leaders do.

Defining Mission. At the tip of his list of characteristics that distinguished effective schools, Austin (1979) noted that they had a stated purpose that their principals clearly communicated to teachers, students, and parents. The important role of the school's chief executive in explicitly framing school goals, purposes, and mission explicitly cannot be overestimated. Organizations that do not fully understand why they exist are subject to all sorts of internal and external pressures. A school that has not fully considered how it will go about the process of education has no criteria for judging whether a new program is worth pursuing or not, whether existing programs are living up to their potential, or whether teachers and staff are contributing most effectively.

A clear sense of mission is particularly important during times when schools are undergoing fundamental structural changes. Change is fundamentally scary. Most of us are creatures of habit. We journey cautiously into the unknown. Mission serves to guide that journey, to let us know when we are on track and when we have reached our destination. Operating without a clear mission is like beginning a journey without having a destination in mind. Chances are you won't know when you get there.

Managing Curriculum and Instruction. The primary service that schools offer is instruction. Effective leaders provide information teachers need to plan their classes effectively and they actively support curriculum development. Although they do not

teach, principals need to be aware of the special needs of each instructional area. In science, for example, they need to recognize the importance, and cost, of activity-based instruction (Mechling & Oliver, 1982). Similarly, in reading, principals need to be aware of newly emerging theories of reading that argue for an instructional approach which focuses on broad, integrated strategies rather than discrete subskill acquisition (Anderson, Hiebert, Scott, & Wilkinson, 1985; Anderson & Pearson, 1984). Without a broad base of knowledge, principals cannot provide the resources teachers and staff need to carry out the school's mission effectively.

Supervising Teaching. The people through whom the school's mission is most directly fulfilled are teachers. Partly because of mandates and partly because of traditional hierarchical structuring of administrator-staff relations, principals have usually been assigned a narrow, evaluative role with respect to teachers. The focus of the effective instructional leader is more broadly oriented to staff development than to performance evaluation. That is, the effective instructional leader is *prospective* rather than *retrospective* regarding staff and focused on what can be, not what was.

Monitoring Student Progress. The school's primary product is a population of graduates who have the technical and life skills they need to cope in an increasingly competitive world. In our society, although the marketplace provides the final test, principal provide a first-level quality control check on the preparation of students. Good instructional leadership need to be aware of the variety of ways in which student progress can and should be assessed. They need to be aware, for example, of both the strengths and limitations of standardized multiple-choice tests and alternative assessment methods (Linn, Baker, & Dunbar, 1991; Sheppard, 1990). Even more importantly, they need to use assessment results in ways that help teachers and students improve and help parents understand where and why improvement is needed.

Promoting Instructional Climate. When they first move to a management position, some mistakenly believe that their primary objective is to tell people what to do. Those who survive for very long in management soon learn that their real primary objective is to motivate people by creating the conditions under which people want to do what needs to be done. When the atmosphere of the school is one that makes learning exciting, when teachers and students are both supported for their achievements, and when there is a shared sense of purpose, it is difficult not to learn, particularly in the critical first years of school when lifelong attitudes toward education are forming. Effective school leaders

help create that excitement, provide the reinforcement, and channel the energy of students and teachers in productive directions.

Functional versus Constructivist Conceptions of Instructional Leadership

These five dimensions provide a useful taxonomy within which much of what instructional leaders do can be described. There is a natural tendency to want to examine the taxonomy in more detail and identify the specific behaviors, activities, or skills that are subsumed by each category. That kind of effort would most likely proceed from functionalistic approach to the study of instructional leadership (Anderson, 1990) or a "skills and facts" approach (Cole, 1990).

Unfortunately, such an approach to the study of instructional leadership encounters some immediate problems. First, as noted earlier, the contexts in which instructional leaders operate vary tremendously as do the opportunities they encounter for expressing leadership in these different contexts. For example, the universe of behaviors through which the vision and purpose of the school can be communicated to teachers, students, and parents is virtually limitless. There are many specific techniques by which the school's instructional program can be focused, elaborated, and strengthened. Action possibilities for staff development and monitoring the instructional program are limited only by the principal's imaginative use of available resources.

Second, cognitive science approaches to the study of learning have revealed that expert performance in any endeavor involves higher-order integration of skills not simple mastery of each discrete skill (Glaser, 1984). In the study of reading, for example, research has shown that comprehension is influenced by a variety of factors, such as prior knowledge, understanding of domain-specific principles, and the reader's purpose, which interact to allow readers to construct models of meaning from text (Anderson, et al., 1985). Similarly, many people know the rules of grammar, have mastered the rules of story telling, can use a word processor, and have a vivid imagination but can't write good literature. In the same way, it is possible to have studied topics such as conflict resolution, resource allocation, and staff supervision--all of which leaders do--without being an effective leader.

One alternative to the functionalist perspective is a constructivist perspective that has its roots in cognitive science. Kelly (1955) was among the first to draw attention to the ways

in which people develop unique construct systems that they use to organize and anticipate events and which, in turn, influence the direction of behavior. Since that time, beliefs, thoughts, and interpretations of behavior have become increasingly legitimate and important areas for study.

From a constructivist perspective, the effective instructional leadership may be perceived as one who strategically applies knowledge to solve contextually specific problems and to achieve the purposes of schooling through others. Effective leaders apply their experience and skill in diverse ways to embed the five basic themes described in the ways they interact with teachers, students, parents, and others (Brubaker, 1985). The essential differences between effective instructional leaders and others are less easily discerned in activities, behaviors, and actions.

Illustrations of the essential difference between activities and the interpretations of these activities, and the potential power which comes from these interpretations, can be found in results of a recent study. In order to assess principals' perceptions of daily events as they relate to instructional leadership, Scott, Ahadi, and Krug (1990) used an experience sampling methodology (ESM: Csikszentmihalyi, Larson, & Prescott, 1977) to study the work weeks of 81 principals. ESM is a technique in which signaling devices carried by the respondents are used to elicit self-report data at random times throughout the day. Five times each day for five consecutive work days we activated a pager that each principal carried. The times occurred randomly throughout the day from 7:00 a.m. to 9:00 p.m. Each time they were paged, principals completed a short form designed to record what they were doing and assess their interpretation of that activity in terms of the instructional leadership dimensions previously described.

Results of this study are too extensive to summarize here and the interested reader should consult the original sources (Ahadi, Scott, & Krug, 1990; Krug, Scott, & Ahadi, 1989; Scott, Ahadi, & Krug, 1990). However, there are many examples in the data that concretely illustrate the difference between activity and interpretation. For example, consider the following set of activities. Although seemingly diverse, each was rated as of great importance in defining and communicating the mission of the school by different principals: participating in an administrative cabinet meeting, writing the weekly staff newsletter, disciplining a group of students, reading to kindergartners, observing a classroom. It is difficult to discern a common thread that runs through these seemingly

different types of behaviors and activities. However, such a thread can quickly be discerned in the mind of the leader.

Table 1 presents data concerning four activities that occupy a significant portion of the principal's day: meeting with teachers, disciplining students, observing classrooms, and attending administrative meetings. When principals were paged, they first described what they were doing at that time in words, then answered a series of questions in response to the general prompt "Right now I am...," such as "defining and/or communicating a school goal," "dealing with a curriculum issue," "creating excitement about teaching and learning," and similar questions intended to sample the full content of the five-dimensional model of instructional leadership previously described. Ratings were made on a five-point scale on which "5" meant "A Great Deal," "4" meant "A Lot," "3" meant "Somewhat," "2" meant "A Little," and "1" meant "Not At All." For example, when principals rated Item 1 a "5" it meant that what they were doing at that moment had a great deal to do with defining and communicating the mission of the school. Principals who rated Item 1 a "1" meant that they felt what they were doing had nothing to do with the school's mission. In addition, principals answered a series of objective items that simply described the activity (e.g., "on the telephone," "meeting with another person," "circulating in the building").

Table 1 show numeric ratings made by different principals of descriptively or functionally equivalent events. For example, when they were paged, Principals A, B, and C each indicated that they were meeting with a teacher. However, principals A and B felt that the activity had nothing to do with curriculum management or cultivating the instructional climate of the school. Principal C on the other hand interpreted the experience much differently.

Although principals B and D were both disciplining students when they were paged, principal B construed the event as having no relevance to the school's mission whereas principal D saw this as an opportunity to communicate the school's purposes and goals to the students in question.

Much of the effective schools literature suggests that the presence of the principal in the classroom is an important factor in the school's success. From the data in Table 1, it would seem that something more than classroom presence is involved. On each of the five dimensions, four principals in the study ranged widely in their assessment of how this activity is relevant to their leadership role. A similar pattern holds with regard to

perceptions of central office meetings, at least in terms of mission and curriculum management. However, there is unanimity among these three principals, at least, that these events had nothing at all to do with supervision of teaching or monitoring student progress.

When formal statistical tests were conducted to determine whether differences among principals could be better explained by the activities in which they were engaged or their interpretations of those activities, the results showed clear differences between the two types of items. Activity descriptive items were much less effective than activity interpretive items (average $F = 1.77$ versus 3.32, $df = 80, 1090$: Krug, Scott, & Ahadi, 1989).

On the one hand, the argument can be made that variations in circumstances led to differences in how principals interpreted the same events. Thus, a chance encounter with a teacher in the parking lot after school might be viewed by one principal as a purely social event, unrelated to his or her role as an instructional leader. In the same way, meeting students at the school bus in the morning might be interpreted simply as a contract requirement.

An alternative interpretation based on a constructivist perspective is that differences in the belief systems of principals led them to construe activities differently and act differently. In a district that required principals to monitor the cafeteria during lunch time, for example, one principal complained that this requirement detracted from the time available to "get important things done." Another principal in this same district used the time to recognize the achievements of students publicly. Parents were notified in advance so that they could be present for the awards ceremony. In this way, lunch became an opportunity to reinforce in students' minds the importance of the school's academic mission, reward achievements, and build school-parent relationships.

Table 1

Quantitative Interpretations of Activities and Events by Principals in the Experience Sampling Study

Activity/Event: Meeting With A Teacher

	Defining Mission	Managing Curriculum	Supervising Teaching	Monitoring Student Progress	Promoting Instructional Climate
Principal A	3	1	3	4	1
Principal B	3	1	1	5	1
Principal C	4	4	4	1	4

Activity/Event Disciplining Students

	Defining Mission	Managing Curriculum	Supervising Teaching	Monitoring Student Progress	Promoting Instructional Climate
Principal B	1	1	1	1	1
Principal D	5	1	1	4	1

Table 1
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Quantitative Interpretations of Activities and Events by Principals in the Experience Sampling Study

Activity/Event: Observing A Classroom

	Defining Mission	Managing Curriculum	Supervising Teaching	Monitoring Student Progress	Promoting Instructional Climate
Principal A	4	4	4	4	2
Principal E	3	5	5	5	4
Principal F	1	3	3	3	1
Principal G	3	2	2	4	3

Activity/Event: Attending a Central Office Administrative Meeting

	Defining Mission	Managing Curriculum	Supervising Teaching	Monitoring Student Progress	Promoting Instructional Climate
Principal A	2	2	1	1	1
Principal E	1	1	1	1	3
Principal H	5	4	1	1	1

There kinds of examples along with the data presented earlier concretely illustrate the point that leadership effectiveness can be more easily discerned in the way leaders construe events than in the events themselves. There is no simple checklist of competencies or practices that the effective school leader must master. Instead, what good instructional leaders do is to find opportunities in their everyday activities and encounters to meet the unique needs of the teachers and students in their schools.

Measuring Leadership

It is difficult--if not impossible--to discuss leadership without specific reference to measurement. Constructs must be linked to operations by which they are assessed if they are to be studied scientifically and if we are to understand the mechanisms by which leadership operates (Krug, In press). For this reason, much effort has been directed toward the development, validation of instruments that specifically operationalize these leadership constructs within a set of psychometrically sound instruments. Separate questionnaires exist for assessing instructional leadership (a) from the perspective of school administrators and (b) from the perspective of teachers. Parallel instruments have also been developed to assess salient aspects of the instructional climate or culture of the school. The ability to quantify the latter is particularly important since culture appears to be the primary medium by which successful leadership is translated into positive student learning outcomes (Deal & Peterson, 1990; Maehr, 1990; Maehr & Fyans, 1989).

The existence of such instruments has allowed us to explore a number of hypotheses about instructional leadership systematically. Each set of results has added to our understanding of the network of relationships that link the instructional leader's behavior to student learning (Krug, 1989; Krug, Ahadi, & Scott, 1991).

For example, the results presented in Table 2 show the correspondence between principal self-reports of instructional leadership and teacher perceptions of instructional leadership. In this study, a total of 78 principals completed the Instructional Leadership Inventory (ILI: Maehr & Ames, 1988), a self-report measure of the five leadership dimensions previously described. Besides these five scales, the ILI includes three contextual scales that assess principals' perceptions of their staff, school, and community. The Staff scale asks principals to what extent a set of 14 adjectives (e.g., committed, self-disciplined, enthusiastic, cooperative) accurately describes staff members in their school. The School scale presents 15 phrases (e.g., "runs smoothly," "has adequate finances," "has a good

reputation in the district") and asks principals to evaluate their schools in terms of each. The third scale contains 11 phases (e.g., "is highly involved in education," "provides an abundance of volunteer services to the school") on which principals rate their community. The inclusion of these last three scales was triggered, in part, by Murphy's (1988) observation that the impact of instructional leadership cannot be fully understood by ignoring the context in which it occurs. We would modify that slightly, however, to mean the context in which instructional leadership is *perceived* to occur. As will shortly be seen, these contextual scales have unusually high predictive power.

In these same 78 schools, 1,623 teachers completed the Instructional Climate Inventory--Form T (ICI-T: Maehr, Braskamp, & Ames, 1988). This instrument contains 100 items that teachers use to rate the school's instructional leadership and the school's instructional climate. The instrument contains additional scales for assessing teacher satisfaction and commitment. The climate scales were adapted from a more general instrument that had been developed to measure organizational culture (Braskamp & Maehr, 1985; Maehr & Braskamp, 1986). In addition to a scale that assesses overall strength of climate, separate scales report the perceived emphasis in the school on excellence, quality and task orientation (Accomplishment), reward of achievements (Recognition), competition (Power), and sense of community (Affiliation). See Maehr, Midgley, and Urdan (this issue) for additional descriptive information regarding these scales.

Prior to calculation of the coefficients reported in Table 2, teacher data were aggregated to form a single school score on each scale. These school scores were then correlated with the principals' data. As Table shows, all the correlations between principal self-reports and teacher ratings of instructional leadership are positive and almost half are statistically significant beyond conventional levels. In interpreting these correlations, note that the results involve the scores of 1,623 teachers, although the significance levels reported reflect the aggregate (N = 78) level.

Table 3 reveals another set of important associations. In this table principal self-reports of instructional leadership are correlated with teacher ratings of satisfaction and commitment. Again, all the leadership scales are positively correlated with teacher satisfaction. However, only the values for the Defining Mission scale and the three leadership context scales are significant beyond conventional levels. The Satisfaction scale includes 12 items that assess major facets of job satisfaction identified in the research literature: satisfaction with work itself, with pay, with advancement, with supervision, and with co-workers.

Correlations with Commitment are somewhat lower, but still generally positive. Once again, the three contextual scales appear to be the strongest predictors.

A final, but critical, dimension to explore is the impact of instructional leadership on students. Table 4 presents data that addresses that question. In the same study in which the principal and teacher ratings of Table 2, 3, and 4 were collected, a total of 10,066 students at grades three, six, eight, and eleven completed form S of the Instructional Climate Inventory (ICI-S: Braskamp & Maehr, 1988). This is a brief, 20-item questionnaire that assesses the same dimensions of school instructional climate measured in the teacher form of the instrument (Accomplishment, Recognition, Power, Affiliation, Strength of Climate) and commitment. Once again, the student data was aggregated to form school scores that could be correlated with the principal data.

Table 4 describes relationships of special significance. Values in this table reflect correlations between student ratings of commitment, on the one hand, and principal self-reports of instructional leadership (column one) and teacher ratings of instructional leadership (column two), on the other. As these data reveal, the relationship between instructional leadership and student commitment is, with only one exception, positive.

Considering that data on more than 10,000 students were aggregated in calculating these coefficients, many reach levels that suggest a very strong empirical relationship. That is, self-reports of principals' instructional leadership by themselves appear to explain as much as a fourth of the total variance (and perhaps as much as 40% of the predictable variance) in the commitment scores of a very large population of students.

From the principals' perspective, their evaluations of positive support for instructional leadership within the school and community are especially highly related to student commitment (.48 and .40, respectively). With respect to the five core dimensions, correlations with teacher ratings are higher than with principal ratings. Perhaps this is no more than should be expected considering that principals' effects on students are usually indirectly exercised through their control of the school's "psychological environment" (Maehr, Midgley, & Urdan, this issue).

Table 2

Correlations Between Principal ILI Self-Reports and Teacher Ratings of Instructional Leadership

Principal Self-Reports	Teacher Ratings: Mission	Curriculum	Teaching	Student Progress	Climate
Mission	.40***	.29***	.24*	.15	.29**
Curriculum	.27*	.32**	.19	.09	.14
Teaching	.20	.24*	.22	.10	.18
Student Progress	.22	.22*	.19	.27*	.18
Climate	.23*	.18	.17	.10	.23*
Staff	.36**	.39**	.32**	.21	.34**
School	.15	.18	.13	.08	.24*
Community	.21	.20	.13	.10	.25*

Note: Based on data from 78 principals and 1,623 teachers.

* $p < .05$
** $p < .01$
*** $p < .001$

Table 3

Correlations Between Principal Self-Reports of Instructional Leadership and Teacher Measures of Satisfaction and Commitment

Principal Self-Reports	Teacher Ratings of Satisfaction	Teacher Ratings of Commitment
Mission	.28*	.12
Curriculum	.20	.15
Teaching	.16	.01
Student Progress	.06	- .01
Climate	.17	.01
Staff	.45***	.42***
School	.28**	.30**
Community	.33**	.35**

Note: Based on data from 78 principals and 1,623 teachers.

* $p < .05$
** $p < .01$
*** $p < .001$

Table 4

Correlations of Student Commitment with Principal Self-Reports and Teacher Ratings of Instructional Leadership

Student Commitment

Scale\Rater	Principal	Teacher
Mission	.17	.31**
Curriculum	.25*	.26*
Teaching	.04	.27*
Student Progress	.21	.26*
Climate	- .04	.28*
Staff	.15	NA
School	.48***	NA
Community	.40***	NA

Note: Based on data from 78 principals, 1,623 teachers, and 10,066 students. The Staff, School, and Community context scales are not included in the ICI-T.

* $p < .05$
** $p < .01$
*** $p < .001$

The significance of carefully mapping these associations cannot be underestimated because their importance extends far beyond the boundaries of principal, teacher, and student rating data. These variables have powerful implications for teacher performance and student learning outcomes as well.

A sizeable body of research has shown that the quality of instruction is usually highest when teachers are satisfied and committed (Firestone & Rosenblum, 1988; Lester, 1988). The data reported in Tables 3 and 4 show that the quality of leadership provided is an important correlate of satisfaction and commitment for both teachers and students within a school.

Other studies (e.g., Brookover, et al., 1979; Rutter, et al., 1979) have provided evidence that school climate is an important predictor of student learning even when the demographic factors with which school climate is correlated are held constant. Within the data set described here, additional information exists regarding the achievement levels of students in these schools. Although the analyses are not yet complete, initial findings reveal statistically and practically significant associations between these variables and student performance in reading and mathematics (Krug, 1991). The data suggest that in the early school years as much as 25% of the variance in student achievement can be attributed to effective school leadership and the learning climate that school leaders shape and nurture. On the presumably reasonable assumption that instructional effects explain the largest proportion of variance in achievement, that another proportion in variance lies outside the control of the school itself (i.e., entry characteristics (Bloom, 1976), and that not all the variance in achievement is systematic (i.e., predictable) this finding is impressive.

Summary

The development of a theoretical structure for understanding school leadership and reliable, theory-based instruments for assessing instructional leadership and instructional climate at all levels of perception (i.e., principals, teachers, students) represents an important advance. Without a clear understanding of the equations that link leadership and learning and measures of variables that influence student learning significantly, the school improvement process and the search for excellence in the classroom can only proceed serendipitously.

The studies discussed in this article provide guidance for future inquiries. Instructional leadership can be conceptualized in terms of five dimensions that can be actualized in a virtually limitless variety of ways. What distinguishes effective instructional leaders from others in not a distinctive set of characteristics but an approach to their work that is guided by a distinctive set of beliefs about what is possible.

This sort of constructive, egalitarian view assumes that everyone can be an effective leader of instruction and carry on the needed reformation of our schools. In the same way that different composers approach each new work by varying the order and tempo at which they present the same 12 tones, instructional leaders approach the same set of daily activities with a different repertoire of motives, experiences, and talents. In both cases the resulting compositions are most likely to be different, but no less enjoyable--and no less effective.

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